## 2016 - NOAA B-WET PD Teacher Survey

This is a voluntary survey.

Please answer the following questions in reference to your recently-completed Meaningful Watershed Educational Experience (MWEE) professional development.

MWEEs are multi-stage activities that include learning both outdoors and in the classroom, and aim to increase the understanding and stewardship of watersheds and related ocean, coastal, riverine, estuarine, and Great Lakes ecosystems of all participants. MWEE professional development (PD) provides K-12 teachers opportunities for professional development to build their confidence and capacity to implement MWEE activities with their students. MWEEs for students consist of multiple components: issue definition and background research, outdoor field activities, stewardship action projects, synthesis and conclusions. In addition, MWEEs should include teacher participation for the duration of the MWEE, be integrated with classroom curriculum, use the local context for learning, consist of a set of activities over time, and incorporate NOAA assets. (For more detail see MWEE Definition 2015)

You will be asked about a range of practices and outcomes that represent the diversity of MWEE PD funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET), some of which may not apply directly to your experience. It is acceptable to answer "not applicable" (N/A) in those instances.

Your responses will be entered anonymously and will not be associated with you as an individual. THANK YOU in advance for your candor and thoughtfulness in answering the questions. Your responses will be aggregated with other teachers' responses, and will be used by NOAA B-WET and B-WET-funded organizations to improve future professional development programs.

It will take about 20-30 minutes to complete this survey, depending on the nature of your professional development experience.

Note: On some computers, you may be able to close the survey and return at a later time to the same place as long as you use the same computer and that computer will save and retain the Qualtrics survey cookie. However, note that some work and public computers do not save and/or retain cookies. Therefore, we recommend that you complete the survey in one sitting, if possible, to avoid issues with saving your data upon returning to the survey.

Thank you.

If you have technical issues or questions about this survey, please contact Bronwen Rice, NOAA B-WET National Coordinator, Bronwen.Rice@noaa.gov

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Statement Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other suggestions for reducing this burden to Bronwen Rice, NOAA Office of Education, Herbert C. Hoover Building, Room 6863, 14th and Constitution Avenue, NW Washington, DC 20230. Responses are voluntary and collected and maintained as anonymous data. Information will be treated in accordance with the Freedom of Information Act (5 USC 552). Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

How long ago did you complete a NOAA-BWET-funded professional development focused on

watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (also known as a Meaningful Watershed Educational Experience professional development or MWEE PD)? O I did not complete a MWEE PD. O Less than 1 week ago O 1-2 weeks ago O 3-4 weeks ago O 5-8 weeks ago O 9-12 weeks ago O More than 12 weeks ago Are you currently an in-service or pre-service PreK-12 teacher or educator? O No O Yes Thank you for completing this survey! Please click on the Submit button below. In what setting do you teach primarily? (select one) O Public school O Private school O Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) O Home-school Other

CREATE A UNIQUE ID: To allow us to compare your current and future responses, please create a unique 8-digit ID number using the 2 digits of your birth month, the 2 digits of your birth day, and the last 4 digits of your most often used phone number. For example, if you were born on March 9 and your home phone is 410.719.1234, your ID number would be 03091234.

In what 5-digit zip code is your school located?

00 00000	which region did you teach this past year? (check one) California Chesapeake Bay watershed (Maryland, Virginia, Delaware, West Virginia, Pennsylvania, New York, and the District of Columbia) Great Lakes (Ohio, Michigan, Indiana, Illinois, Minnesota, Wisconsin, New York, and Pennsylvania) Gulf of Mexico (Texas, Louisiana, Mississippi, Alabama, and Florida) Hawaii New England (Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island) Pacific Northwest (Oregon and Washington) Other (please describe)
000	which grade level do you teach primarily? (select one)  PreK  Elementary  Middle  High  Other, please describe
0000000000	hat subject(s) do you teach primarily? (select one) Science Technology Engineering Math English Language Arts Social studies Music Fine arts Multiple disciplines, including science Multiple disciplines, not including science Other (please describe)
O O	ow many years have you been an educator? (select one) 0 to 5 years 6 to 10 years 11 to 20 years More than 20 years
pai this	d you conduct Meaningful Watershed Educational Experiences (MWEEs) with your students before rticipating in the MWEE professional development? (For an expanded definition of a MWEE, view s file: MWEE Definition 2015)  No Yes
00000	hat was your PRIMARY reason for participating in the MWEE professional development? (check one) To obtain information and resources for teaching Personal interest in the topic of the professional development To obtain continuing education, recertification, graduate credit, or a stipend I was required to attend I was asked to attend Other, please describe:

Please answer all of the following survey questions based on the last NOAA B-WET-funded MWEE (watershed education) professional development you participated in.

Which type(s) of MWEE professional development did you participate in or receive: (please select No or Yes for each type)

1 es foi each type)		
	No	Yes
One day workshops (usually less than 8 hours)	0	O
Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more)	0	O
Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions)	0	<b>O</b>
A college-level course	0	O
Professional development provider training (training for individuals who provide teacher professional development)	0	<b>O</b>
Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support)	0	0
On-line professional development support (e.g., courses, webinars, discussion forums)	0	O

gro	er what period of time was the NOAA B-WET-funded MWEE professional development (including oup and individual training and support)? (For example, if you participated in a summer workshop lowed by classroom support over the entire school year, you would select 9-12 months.)
$\mathbf{O}$	Less than a week
	One week up to a month
O	1 to 4 months
$\mathbf{O}$	5 to 8 months
$\mathbf{O}$	9 to 12 months
$\mathbf{O}$	More than a year
$\mathbf{O}$	More than 2 years
Ab	out how many hours of MWEE professional development and/or support did you receive over the past
12	months?
O	1-10 hours
O	11-20 hours
O	21-40 hours
$\mathbf{O}$	41-60 hours
$\mathbf{O}$	More than 60 hours
	out how many of those MWEE professional development hours did you spend outdoors?
O	None
O	1-10 hours
$\mathbf{O}$	11-20 hours
$\mathbf{O}$	21-40 hours

**O** 41-60 hours

O More than 60 hours

Wh	nich NOAA resources were used as part of your MWEE professional development? (check all that
app	ply)
	I don't know
	None
	Information from NOAA websites or reports (e.g., NOAA website, NOAA Education Resources
	webpage, NOAA Climate Portal, Marine Debris Program Education webpage, NOAA FishWatch,
	NERRS education website). IF YES, please name the websites or reports:
	Data sets collected by and accessible through NOAA (e.g., NOAA View, NOAA Digital Coast,
	NOAA Buoys, Real-time Tides and Currents, NERRS SWMP data) IF YES, please name the
	NOAA data sets:
	NOAA experts (e.g., scientist, educator, Sea Grant staff member, policy expert) IF YES, please
	name the NOAA expert(s):
	NOAA curricula and education programs (e.g., Data in the Classroom, Estuaries 101 curriculum,
	Ocean Exploration) IF YES, please name the curricula or programs:
	NOAA labs or facilities (e.g., Northeast Fisheries Science Center Milford Lab, NOAA Chesapeake
	Bay Office Oxford Lab, Southeast Fisheries Science Center in Pascagoula MS, NOAA Science On a
	Sphere sites, Sea Grant floating classroom vessel) IF YES, please list the NOAA labs or facilities:
	NOAA National Marine Sanctuary, http://sanctuaries.noaa.gov/about/welcome.html IF YES, please
	name the sanctuary:
	NOAA National Estuarine Research Reserve, http://www.nerrs.noaa.gov IF YES, please list the
	Reserve:

What education methods were used during your MWEE professional development? (select No or Yes for each method)

	Not sure	No	Yes
Outdoor field trip or field work (i.e., excursion to learn about natural history and ecology in the outdoors, may or may not include data collection)	0	0	0
STEM education (i.e., an approach to teaching that integrates the content and skills of science, technology, engineering, and math to inspire students and prepare them for 21st century jobs)	0	<b>O</b>	<b>O</b>
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning)	<b>O</b>	0	O
Scientific-inquiry-based learning (i.e., an instructional strategy that gives students the opportunity to explore an idea or question. To arrive at an answer or to better understand the concept, students often collect and analyze data)	0	<b>O</b>	<b>O</b>
Issue investigation (i.e., an interdisciplinary instructional strategy that engages learners in investigating complex, real-world environmental issues and problem-solving as the context for teaching and learning)	<b>O</b>	<b>O</b>	<b>O</b>
Service learning (i.e., an instructional strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities)	0	<b>O</b>	<b>O</b>

Answer If What education methods were used during your MWEE professional development? (select No or Yes for... Scientific-inquiry-based learning (i.e., an instructional strategy that gives students the opportunity to explore an idea or question. To arrive at an answer or to better understand the concept, students often collect and analyze data) - Yes Is Selected

As part of your MWEE professional development, were you involved in these science practices? (choose not sure, no, or yes for each practice)

	Not sure	No	Yes
Asking questions	<b>O</b>	O	$\mid \mathbf{c} \mid$
Developing and using models	<b>O</b>	O	$\mid \mathbf{c} \mid$
Planning and carrying out investigations	<b>O</b>	O	$\mid \mathbf{c} \mid$
Analyzing and interpreting data	<b>O</b>	O	$\mid \mathbf{c} \mid$
Using mathematics and computational thinking	<b>O</b>	O	$\mid \mathbf{c} \mid$
Constructing explanations	<b>O</b>	0	$\mid \mathbf{c} \mid$
Engaging in argument from evidence	<b>O</b>	0	$\mid \mathbf{c} \mid$
Obtaining, evaluating, and communicating information	0	O	$oxed{c}$

## Answer If Which type(s) of MWEE professional development did you ...

- One day workshops (usually less than 8 hours) Yes Is Selected Or .
- Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) Yes Is Selected Or
- Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) Yes Is Selected Or
- A college-level course Yes Is Selected

Did the workshops, institutes, or classes you participated in include the following professional development practices or support? (Please indicate No or Yes for each statement)

	No	Yes
Sharing of information and examples illustrating how other teachers have integrated MWEEs	0	0
Discussion of how teachers may be able to integrate MWEEs into their own curriculum or classroom activities	O	<b>O</b>
Engaging you and other participating teachers in aligning MWEEs with your school or school district standards	O	<b>O</b>
Participating along with other teachers from my school, at the same time	0	O
Allowing you and other participating teachers time to plan how to implement MWEEs	0	O
Engaging you and other participating teachers in activities/practices that can be used with your students	0	O
Presentation of how NOAA data can be used to support student scientific inquiry	O	O
Discussion of how NOAA data can be used to obtain knowledge about local issues	O	O
Examples of how other teachers have used NOAA data with their students	0	O
Allow you and other participating teachers time to plan how to integrate the use of NOAA data with your students	0	0

## Answer If Did the workshops, institutes, or classes you participated in include the following professional... - Yes Is Selected

Which of these practices or support was most valuable for preparing you to teach MWEEs? (select up to 3)

Did the MWEE professional development include the following practices or support? (Please indicate No or Yes for each statement)

	No	Yes
Assistance with conducting field trips or field work	O	0
Assistance with stewardship projects, e.g., restoration projects, building schoolyard habitats, etc.	O	O
Co-teaching in my classrooms or in field	O	O
Coaching in my classroom	O	0
Demonstrations in my classroom	O	O
Assistance with the use of equipment or technologies	O	O
Communicating one-on-one with provider through phone calls or email	O	O
Communication with other teachers through a provider-supported online environment	O	O
Connections were made to local community organizations and resources	O	O
Interactions were facilitated with natural resource professionals	O	0
I was provided with equipment	O	O
I was provided with instructional/educational/curriculum materials	O	O
I was provided with information on how to obtain grants or funding for MWEEs	O	C

## Answer If What types of support did you receive from your MWEE professional development provider? (Please i... - Yes Is Selected

Which of these practices or support was most valuable for helping you to conduct MWEEs? (select up to 3)

Did the MWEE professional development include the following incentives or support? (Please indicate No or Yes for each statement)

	No	Yes
I was provided with a stipend	0	0
I was offered continuing education credits	0	0
I was offered graduate credits	O	0
Other incentive or support (please describe)	0	0

Answer If Which additional resources did your MWEE professional development and/or the support include? (Please indicate No or Yes for each statement) - Yes Is Selected

Which of these practices or support was most valuable in enabling you to participate in this professional development? (select one)

	ring your MWEE professional development, did you participate in any of these actions that profect or tore watersheds (ocean, coastal, riverine, estuarine, Great Lakes)? (select all categories that apply)
	I did NOT participate in watershed protection or restoration actions as part of the MWEE PD. Watershed Restoration or Protection (e.g., create schoolyard habitat, planting trees or grasses, invasive species removal, cleanup [e.g., beach, stream, school, community), raise & release (e.g., fish, oysters, turtles), stormwater management (e.g., rain garden, paint storm drains] Briefly describe the actions:
	Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation] Briefly describe the actions:
	Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters] Briefly describe the actions:
	Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change] Briefly describe the actions:
	Other Briefly describe the actions:
fron	d your B-WET professional development provider indicate that it was funded (in part) with funding m the National Oceanic and Atmospheric Administration (NOAA)?  No Yes
bet* O O O O O O O O O O	2 3 4 5 6 7 8

Briefly describe why you selected this grade.

For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development.

professional development.														
	BEFORE t I was able	elopment,	AFTER the professional development, I am able to:											
	Strongly disagree 1	2	3	4	5	6	Strongly agree7	Strongly disagree 1	2	3	4	5	6	Strongly agree 7
Define the term "watershed"	0	O	O	0	O	0	•	0	O	0	0	0	0	O
Identify my local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes)	<b>O</b>	0	0	0	0	0	O	O	0	0	0	0	0	0
Identify how watersheds are connected to the ocean via streams, rivers, and human- made structures	<b>O</b>	O	0	0	0	0	<b>O</b>	O	0	0	0	0	0	0
Identify the functions that occur in a watershed (transport, store, and cycle water)	<b>O</b>	0	0	0	0	0	O	O	0	0	0	0	0	0
Recognize that both natural processes and human activities affect water flow and water quality in watersheds	<b>O</b>	0	0	0	0	0	<b>O</b>	O	0	0	0	0	0	•
Identify connections between human welfare and water flow and quality	<b>O</b>	0	0	0	0	0	•	O	0	0	0	0	•	0
Identify possible point and non-point sources of water pollution	O	O	0	0	0	0	O	O	0	0	0	0	0	0
Identify actions individuals can take to protect or restore watersheds	O	0	0	•	0	•	O	0	C	•	•	•	0	0

Did participating in the B-WET professional development increase your knowledge of ...

	No	Yes
what NOAA does?	O	O
scientific data accessible through NOAA?	0	O
educational resources available through NOAA?	0	<b>O</b>

For each statement, select one response for BEFORE and one response for AFTER the MWEE

professional development.

professional development.														
	BEFORE of developme your abilit	ional were you in	AFTER the MWEE professional development, how confident are you in your ability to:											
	Not at all confiden t 1	2	3	4	5	6	Extremel y confident 7	Not at all confiden t 1	2	3	4	5	6	Extremel y confident 7
Teach my students about local watersheds (ocean , coastal, riverine, estuarine, Great Lakes)	<b>O</b>	0	0	0	0	0	•	0	0	0	0	0	0	0
Incorporate MWEEs into my curriculum	0	O	O	<b>O</b>	O	O	O	0	O	<b>O</b>	O	O	0	O
Implement MWEEs without support from a professional development provider	O	0	0	0	0	0	0	0	O	0	0	0	0	0
Use NOAA resources to enhance my students' MWEE experiences	<b>O</b>	O	0	0	0	0	•	<b>O</b>	O	0	<b>O</b>	O	O	•
Guide students through taking action to protect or restore watersheds	0	O	O	O	O	O	•	0	0	O	O	0	0	•

For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development.

professional development.														
	BEFORE the MWEE professional development, how confident were you in your ability to:							AFTER the MWEE professional development, how confident are you in your ability to:						
	Not at all confident 1	2	3	4	5	6	Extremely confident 7	Not at all confident 1	2	3	4	5	6	Extremely confident 7
Research environmental issues affecting watersheds with students	O	0	0	<b>O</b>	0	0	0	Q	0	0	0	0	0	0
Use scientific inquiry instruction	0	O	O	O	O	0	O	0	O	O	0	0	0	0
Use the outdoors for instruction	0	O	O	O	O	0	O	0	O	O	O	0	0	O
Act to protect or restore watersheds	0	O	O	O	O	O	O	0	O	O	O	0	O	0

Select one response for each statement.

Select one response for each statement.							
	During the next school year, I intend to:						
	Strongly disagree 1	2	3	4	5	6	Strongly agree7
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes)	0	O	$ \mathbf{c} $	0	0	0	O
Incorporate MWEEs into my curriculum	<b>O</b>	O	$ \mathbf{o} $	0	O	0	<b>O</b>
Implement MWEEs without support from a professional development provider	0	O	$ \mathbf{c} $	0	0	0	•
Use NOAA resources to enhance my students' MWEE experiences	0	O	O	0	0	O	•
Guide students through taking action to protect or restore watersheds	0	O	O	0	O	O	O
Research environmental issues affecting watersheds with students	0	O	O	0	O	O	O
Use scientific inquiry instruction	O	O		0	0	0	<b>O</b>
Use the outdoors for instruction	0	0	$ \mathbf{o} $	0	O	0	<b>O</b>
Act to protect or restore watersheds	0	O	O	O	O	O	<b>O</b>

About how many of your students wi	ll participate in a MWEE	during the next school	year? (Please
provide your best estimate, NOT a ra	nge)		

What component(s) of the MWEE professional development best prepared you to teach your students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes)?

How could the MWEE professional development be improved to better prepare teachers to teach about watersheds (ocean, coastal, riverine, estuarine, Great Lakes)?

Do you have any other comments about the MWEE professional development?

This questionnaire was .... (choose one for each line)

	1	2	3	4	5	6	7
Difficult to complete:Easy to complete	0	O	O	O	O	O	O
Long:Short		O	0	O	O	0	

How can this questionnaire be improved?

What final comments would you like to share?